AMENDMENTS TO THE CLAIMS

The following claims replace all prior versions and listings of claims in this application:

Listing of claims:

1. (Currently Amended) An optical node for dropping one or more of a select set of predetermined wavelengths from a plurality of bands of a multi-wavelength optical signal in an optical communications network, wherein the select set contains only a portion of the wavelengths in the bands and wherein said network comprises a plurality of nodes connected by an optical transmission medium carrying a plurality of wavelengths divided into discrete bands, wherein each band constitutes a group of contiguous wavelengths, said node comprising:

An optical drop unit containing a fixed drop filter, wherein said filter drops one or more of a select ~~fixed~~ set of predetermined wavelengths at the node, wherein the ~~fixed~~ set includes wavelengths from one or more different bands, while forwarding wavelengths that do not comprise the predetermined select ~~fixed~~ set through the node.

2. (Original) The optical node according to claim 1, wherein the fixed set of wavelengths is predetermined prior to installation of the filter in the network.

3. (Original) The optical node of claim 2, wherein the fixed set of wavelengths is independent of a level of traffic at the node.

4. (Original) The optical node of claim 2, wherein the fixed set initially includes wavelengths that do not carry information, in order to reserve the wavelengths that do not carry information for future growth of the network.

5. (Original) The optical node of claim 4, wherein the node includes:

a plurality of thin-film filters for removing the fixed set of wavelengths from the network; and

a receiver for converting the fixed set of wavelengths to electrical signals.

6. (Original) The node of claim 1, wherein the fixed set comprises one wavelength from each band in the network.

7. (Original) The node of claim 1, wherein the fixed set comprises two wavelengths from a first band, and two wavelengths from a second band.

8. (Original) The node of claim 1, wherein the fixed set comprises a first wavelength from a first band, and a plurality of wavelengths from a second band.

9. (Original) The node of claim 1, wherein the fixed set comprises multiple wavelengths from a plurality of bands.

10. (Currently Amended) A fixed filter for an optical node in an optical communications network, said network comprising a transmission medium carrying wavelengths divided into discrete bands, wherein each band is defined by a group of contiguous wavelengths, said filter comprising:

a plurality of optical filters arranged in series on a single optical drop card, wherein each of said plurality of filters is designed to drop ~~a~~ one or more of a select set of predetermined wavelengths, wherein the select set contains only a portion of the wavelengths in the bands from a multi-wavelength optical signal and forward all wavelengths other than said select set of predetermined wavelengths.

11. (Original) The fixed filter of claim 10, wherein the plurality of optical filters comprises a plurality of optical thin-film filters.

12. (Original) The fixed filter according to claim 10, wherein a first optical filter drops a first wavelength from a first band and a second optical filter drops a second wavelength from a second band.

13. (Original) The fixed filter according to claim 10, wherein a first optical filter drops a first wavelength from a first band, a second optical filter drops a second wavelength from said

first band, a third optical filter drops a third wavelength from a second band, and a fourth optical filter drops a fourth wavelength from said second band.

14. (Original) The fixed filter according to claim 10, wherein the fixed drop filter drops a fixed set of wavelengths from a plurality of bands in the multi-wavelength optical signal.

15. (Currently Amended) A method of dropping wavelengths from a multi-wavelength optical signal in an optical communications network, said network comprising a plurality of nodes connected by an optical transmission medium carrying a plurality of wavelengths divided into discrete bands, wherein each band constitutes a group of contiguous wavelengths, said method comprising:

determining a ~~fixed~~ select set of predetermined wavelengths to be dropped at an intermediate node in the network, wherein the ~~fixed~~ select set wherein the select set contains only a portion of the wavelengths in the bands and includes wavelengths from a plurality bands in the multi-wavelength optical signal;

deploying a filter to drop the select predetermined ~~fixed~~ set; and

forwarding wavelengths in the optical signal that do not comprise the predetermined select ~~fixed~~ set.

16. (Currently Amended) The method of claim 15, wherein the step of determining the ~~fixed~~ select set includes partitioning each band into a first subset of wavelengths to be dropped at a particular node and a second subset of wavelengths to pass through the node unaffected.

17. (Currently Amended) The method of claim 16, wherein the step of determining the ~~fixed~~ select set further includes selecting individual filter components that correspond to each wavelength in the ~~fixed~~ select set.

18. (Original) The method of claim 16, wherein the step of partitioning includes selecting one wavelength from each band in the multi-wavelength optical signal to be included in the first subset.

19. (Original) The method of claim 16, wherein the step of partitioning includes selecting two wavelengths from a first band and two wavelengths from a second band to be included in the first subset.

20. (Original) The method of claim 16, wherein the step of partitioning includes selecting one wavelength from a first band, and a plurality of wavelengths from a second band to be included in the first subset.

21. (Original) The method of claim 16, wherein the step of partitioning includes selecting multiple wavelengths from a plurality of bands to be included in the first subset.

22. (Currently Amended) An optical node for adding wavelengths to a multi-wavelength optical signal in an optical communications network, wherein said network comprises a plurality of nodes connected by an optical transmission medium carrying a plurality of wavelengths divided into discrete bands, wherein each band constitutes a group of contiguous wavelengths, said node comprising:

an optical add unit containing a fixed filter, wherein said filter adds a ~~fixed~~ select set of predetermined wavelengths ,wherein the select set contains only a portion of the wavelengths in the bands, to the multi-wavelength optical signal at the node, wherein the ~~fixed~~ select set includes wavelengths from different bands.

23. (Currently Amended) The optical node according to claim 22, wherein the ~~fixed~~ select set of wavelengths is predetermined prior to installation of the filter in the network.

24. (Currently Amended) The optical node of claim 23, wherein the ~~fixed~~ select set of wavelengths is independent of a level of traffic at the node.

25. (Currently Amended) The optical node of claim 23, wherein the ~~fixed~~ select set initially includes wavelengths that do not carry information, in order to reserve the wavelengths that do not carry information for future growth of the network.

26. (Currently Amended) The node of claim 22, wherein the ~~fixed~~ select set comprises one wavelength from each band in the network.

27. (Currently Amended) The node of claim 22, wherein the ~~fixed~~ select set comprises two wavelengths from a first band, and two wavelengths from a second band.

28. (Currently Amended) The node of claim 22, wherein the ~~fixed~~ select set comprises a first wavelength from a first band, and a plurality of wavelengths from a second band.

29. (Currently Amended) The node of claim 22, wherein the ~~fixed~~ select set comprises multiple wavelengths from a plurality of bands.

30. (Currently Amended) An optical add/drop node for adding and dropping wavelengths from a multi-wavelength optical signal in an optical communications network, wherein said network comprises a plurality of nodes connected by an optical transmission medium carrying a plurality of wavelengths divided into discrete bands, wherein each band constitutes a group of contiguous wavelengths, said node comprising:

an optical add/drop unit containing a fixed add/drop filter, wherein said filter drops and adds a ~~fixed~~ select set of predetermined wavelengths at the node, wherein the select set contains only a portion of the wavelengths in the bands and wherein the ~~fixed~~ select set includes wavelengths from different bands, while forwarding wavelengths that do not comprise the ~~fixed~~ select set through the node.

31. (Currently Amended) The optical node according to claim 30, wherein the ~~fixed~~ select set of wavelengths is predetermined prior to installation of the filter in the network.

32. (Currently Amended) The optical node of claim 31, wherein the ~~fixed~~ select set of wavelengths is independent of a level of traffic at the node.

33. (Currently Amended) The optical node of claim 31, wherein the ~~fixed~~ select set initially includes wavelengths that do not carry information, in order to reserve the wavelengths that do not carry information for future growth of the network.

34. (Currently Amended) The optical node of claim 33, wherein the node includes:

a plurality of thin-film filters for removing the ~~fixed~~ select set of predetermined wavelengths from the network; and

a receiver for converting the ~~fixed~~ select set of predetermined wavelengths to electrical signals.

35. (Currently Amended) The node of claim 30, wherein the ~~fixed~~ select set comprises one wavelength from each band in the network.

36. (Currently Amended) The node of claim 30, wherein the ~~fixed~~ select set comprises two wavelengths from a first band, and two wavelengths from a second band.

37. (Currently Amended) The node of claim 30, wherein the ~~fixed~~ select set comprises a first wavelength from a first band, and a plurality of wavelengths from a second band.

38. (Currently Amended) The node of claim 30, wherein the ~~fixed~~ select set comprises multiple wavelengths from a plurality of bands.

39. (Currently Amended) A method of adding wavelengths to a multi-wavelength optical signal in an optical communications network, said network comprising a plurality of nodes connected by an optical transmission medium carrying a plurality of wavelengths divided into discrete bands, wherein each band constitutes a group of contiguous wavelengths, said method comprising:

determining a ~~fixed~~ select set of predetermined wavelengths to be added at an intermediate node in the network, wherein the select set contains only a portion of the wavelengths in the bands and wherein the ~~fixed~~ select set includes wavelengths from a plurality bands in the multi-wavelength optical signal; and

deploying a filter to add the ~~fixed~~ select set of predetermined wavelengths to the multi-wavelength optical signal.

40. (Currently Amended) The method of claim 39, wherein the step of determining the ~~fixed~~ select set includes partitioning each band into a first subset of wavelengths to be added at a particular node and a second subset of wavelengths that is not added to the multi-wavelength optical signal at the node.

41. (Original) The method of claim 40, wherein the step of partitioning includes selecting one wavelength from each band in the multi-wavelength optical signal to be included in the first subset.

42. (Original) The method of claim 40, wherein the step of partitioning includes selecting two wavelengths from a first band and two wavelengths from a second band to be included in the first subset.

43. (Original) The method of claim 40, wherein the step of partitioning includes selecting one wavelength from a first band, and a plurality of wavelengths from a second band to be included in the first subset.

44. (Original) The method of claim 40, wherein the step of partitioning includes selecting multiple wavelengths from a plurality of bands to be included in the first subset.

45. (Currently Amended) A method of adding and dropping wavelengths from a multi-wavelength optical signal in an optical communications network, said network comprising a plurality of nodes connected by an optical transmission medium carrying a plurality of wavelengths divided into discrete bands, wherein each band constitutes a group of contiguous wavelengths, said method comprising:

determining a ~~fixed~~ select set of predetermined wavelengths to be added and dropped at an intermediate node in the network, wherein the select set contains only a portion of the

wavelengths in the bands and wherein the ~~fixed~~ select set includes wavelengths from a plurality bands in the multi-wavelength optical signal;

deploying a filter to add and drop the ~~fixed~~ select set; and

forwarding wavelengths in the optical signal that do not comprise the ~~fixed~~ select set.

46. (Currently Amended) The method of claim 45, wherein the step of determining the ~~fixed~~ select set includes partitioning each band into a first subset of wavelengths to be added/dropped at a particular node and a second subset of wavelengths to pass through the node unaffected.

47. (Currently Amended) The method of claim 46, wherein the step of determining the ~~fixed~~ select set further includes selecting individual filter components that correspond to each wavelength in the fixed set.

48. (Original) The method of claim 46, wherein the step of partitioning includes selecting one wavelength from each band in the multi-wavelength optical signal to be included in the first subset.

49. (Original) The method of claim 46, wherein the step of partitioning includes selecting two wavelengths from a first band and two wavelengths from a second band to be included in the first subset.

50. (Original) The method of claim 46, wherein the step of partitioning includes selecting one wavelength from a first band, and a plurality of wavelengths from a second band to be included in the first subset.

51. (Original) The method of claim 46, wherein the step of partitioning includes selecting multiple wavelengths from a plurality of bands to be included in the first subset.